

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) a method of detecting a position of at least one lead of an electric component which additionally includes a body from which said at least one lead extends, the method comprising the steps of

~~illuminating a lengthwise limited portion of the lead, illuminating,~~ with a light incident ~~thereto~~ to said at least one lead in a direction substantially perpendicular to a lengthwise direction ~~of the lead, thereof,~~ a lengthwise limited portion of said at least one lead without illuminating a base end portion thereof that is adjacent to the body,

_____ taking an image of the lengthwise limited portion of said at least one lead, on a side of a free end ~~of the lead, thereof,~~ in a direction parallel to the lengthwise direction ~~of the lead, thereof,~~ and

detecting the position of ~~the lead~~ said at least one lead by processing image data representing the taken image.

2. (Currently Amended) The method according to claim 1, wherein the electric component includes a plurality of said leads, and wherein the step of detecting the position of ~~the lead~~ said at least one lead comprises detecting a position of one of the leads relative to a position of the other lead.

3. (Currently Amended) The method according to claim 1, wherein the light comprises a planar light which is incident to ~~the~~ said at least one lead along a plane substantially perpendicular to the lengthwise direction ~~of the lead, thereof,~~

4. (Currently Amended) The method according to claim 1, wherein the limited portion of ~~the lead~~ said at least one lead is distant from the free end thereof by a predetermined distance toward ~~a base end~~ the base end portion thereof.

5. (Currently Amended) The method according to claim 1, wherein the limited portion of ~~the lead-said at least one lead~~ consists of the free end thereof and a portion thereof adjacent to the free end.

6. (Currently Amended) The method according to claim 1, wherein the step of illuminating the limited portion of ~~the lead-said at least one lead~~ comprises illuminating a substantially entire, outer circumferential surface of the limited portion of the lead-said at least one lead with the light incident thereto in a plurality of directions substantially directed to ~~the lead-said at least one lead~~ in a plane substantially perpendicular to the lengthwise direction of ~~the lead-said at least one lead~~.

7. (Previously Presented) The method according to claim 6, wherein the plurality of directions comprise at least three directions.

8. (Previously Presented) The method according to claim 1, wherein the light comprises a laser light.

9. (Currently Amended) The method according to claim 1, wherein the step of illuminating the limited portion of ~~the lead-said at least one lead~~ comprises illuminating the limited portion of ~~the lead-said at least one lead~~ of the electric component held by a component holding head, with the light incident thereto, and wherein the step of taking the image of ~~the lead-said at least one lead~~ comprises taking the image of ~~the lead-said at least one lead~~ of the electric component held by the component holding head, on the side of the free end of ~~the lead-said at least one lead~~, in the direction parallel to the lengthwise direction of ~~the lead-thereof~~.

10. (Currently Amended) The method according to claim 9, further comprising a step of moving the component holding head holding the electric component, in a direction substantially perpendicular to the lengthwise direction of ~~the lead-said at least one lead~~, wherein the step of taking the image of ~~the lead-said at least one lead~~ comprises taking the

image of ~~the lead~~ said at least one lead of the electric component held by the holding head, midway on a locus of movement of ~~the lead~~ said at least one lead.

11. (Currently Amended) The method according to claim 10, wherein the step of illuminating the limited portion of ~~the lead~~ said at least one lead comprises illuminating the limited portion of ~~the lead~~ said at least one lead of the electric component held by the component holding head, with the light incident thereto from a projector provided at a position offset from the locus of movement of ~~the lead~~ said at least one lead.

12. (Currently Amended) The method according to claim 1, wherein the electric component comprises a connector which includes said at least one lead and which is mounted on a circuit substrate such that said at least one lead is inserted in at least one hole formed in the circuit substrate.

13. (Currently Amended) a method of mounting, on a circuit substrate, an electric component including a body and at least one lead extending from the body, the method comprising the steps of

holding, with a component holding head, the electric ~~component~~ component,

carrying out the method of claim 1, wherein the step of illuminating comprises:

illuminating the lengthwise limited portion of ~~the lead~~ said at least one lead of the electric component held by the component holding head, and

modifying, based on data representing the detected position of said at least one the lead, data representing a reference position of one of the component holding head and the circuit substrate relative to the other of the holding head and the circuit substrate, and inserting ~~the lead~~ said at least one lead of the electric component in at least one ~~a~~ hole formed in the circuit substrate.

14. (Currently Amended) An apparatus for detecting a position of at least one lead of an electric component which additionally includes a body from which said at least one lead

extends, the apparatus comprising:

a locally illuminating device which ~~illuminates a lengthwise limited portion of the lead~~ illuminates, with a light incident thereto to said at least one lead in a direction substantially perpendicular to a lengthwise direction ~~of the lead;~~ thereof, a lengthwise limited portion of said at least one lead without illuminating a base end portion thereof that is adjacent to the body;

_____ an image taking device which takes an image of the lengthwise limited portion of said at least one lead, on a side of a free end of the lead, thereof, in a direction parallel to the lengthwise direction of the lead; and thereof; and

_____ an image processing device which detects the position of the lead said at least one lead by processing image data representing the image taken by the image taking device.

15. (Previously Presented) The apparatus according to claim 14, further comprising a support member which supports the locally illuminating device and the image taking device.

16. (Previously Presented) The apparatus according to claim 15, wherein the support member comprises:

a flat base portion which has, in a central portion thereof, an opening in which the image-taking device fits; and

a holding portion which extends from the flat base portion in a direction perpendicular to the flat base portion and which supports the locally illuminating device.

17. (Previously Presented) The apparatus according to claim 16, wherein the locally illuminating device comprises a plurality of projectors and wherein the holding portion of the support member comprises a plurality of projector-holding portions which extend from an outer peripheral portion of the flat base portion in the direction perpendicular to the flat base portion and which support the plurality of projectors of the locally

illuminating device, respectively.

18. (Currently Amended) The apparatus according to claim 14, wherein the locally illuminating device comprises at least one projector which has an outlet and projects the light through the outlet, and wherein the apparatus further comprises:

_____ a support member which supports the projector such that the projector is pivotable about an axis line which is spaced from ~~the lead~~ said at least one lead and is perpendicular to ~~the lead;~~ said at least one lead; and

_____ an adjusting device which is provided between the projector and the support member and which adjusts an angular position of the projector relative to the support member and thereby adjusts a position where the light projected by the projector is incident to ~~the lead;~~ said at least one lead.

19. (Previously Presented) The apparatus according to claim 18, wherein the projector has the outlet thereof in a vicinity of the axis line thereof.

20. (New) The apparatus according to claim 14, wherein the locally illuminating device emits a planar light which is incident to said at least one lead along a plane substantially perpendicular to the lengthwise direction thereof.

21. (New) The apparatus according to claim 14, wherein the locally illuminating device illuminates a substantially entire, outer circumferential surface of the limited portion of said at least one lead with the light incident thereto in a plurality of directions substantially directed to said at least one lead in a plane substantially perpendicular to the lengthwise direction of said at least one lead.

22. (New) The method according to claim 1, wherein the step of illuminating the lengthwise limited portion of said at least one lead comprises illuminating an outer surface of the lengthwise limited portion, the outer surface extending in the lengthwise direction of said at least one lead parallel to the direction in which the image of the lengthwise limited portion

is taken, and wherein the step of taking the image comprises taking an image of the outer surface of the lengthwise limited portion, on the side of the free end of said at least one lead, in the direction parallel to the lengthwise direction thereof.

23. (New) The apparatus according to claim 14, wherein the locally illuminating device illuminates an outer surface of the lengthwise limited portion of said at least one lead, the outer surface extending in the lengthwise direction of said at least one lead parallel to the direction in which the image taking device takes the image of the lengthwise limited portion, and wherein the image taking device takes an image of the outer surface of the lengthwise limited portion, on the side of the free end of said at least one lead, in the direction parallel to the lengthwise direction thereof.